

# Reteaching 7-1

## Solving Two-Step Equations

Solve  $\frac{k}{5} - 9 = -7$ .

$$\frac{k}{5} - 9 = -7$$

$$\frac{k}{5} - 9 + 9 = -7 + 9$$

Add 9 to each side.

$$\frac{k}{5} = 2$$

Simplify.

$$\frac{k}{5} \cdot 5 = 2 \cdot 5$$

Multiply each side by 5.

$$k = 10$$

Simplify.

Complete the example.

1.  $4n + 13 = 1$

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Subtract 13 from each side.

\_\_\_\_\_

Simplify.

\_\_\_\_\_

Divide each side by 4.

\_\_\_\_\_

Simplify.

Solve each equation.

2.  $3x - 5 = 10$   $x =$  \_\_\_\_\_

3.  $\frac{n}{2} + 10 = 7$   $n =$  \_\_\_\_\_

4.  $\frac{m}{7} - 9 = -5$   $m =$  \_\_\_\_\_

5.  $5w - 2 = -12$   $w =$  \_\_\_\_\_

6.  $4a + 12 = -8$   $a =$  \_\_\_\_\_

7.  $\frac{b}{3} + 8 = -7$   $b =$  \_\_\_\_\_

**Reteaching 7-2****Solving Multi-Step Equations**

Solve  $6 - 2(x + 5) = 8$

$6 - 2(x + 5) = 8$

$6 - 2x - 10 = 8$

$-2x - 4 = 8$

$-2x - 4 + 4 = 8 + 4$

$-2x = 12$

$\frac{-2x}{-2} = \frac{12}{-2}$

$x = -6$

Distribute.

Simplify. Think of  $6 - 2x$  as  $6 + (-2x)$ . Then subtract  $6 - 10$ .

Add 4 to each side.

Simplify.

Divide each side by  $-2$ .

Simplify.

**Solve each equation.**

1.  $3(a - 4) = 9$

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Distribute.

Add 12 to each side.

Simplify.

Divide each side by 3.

Simplify.

**Solve each equation.**

2.  $n + 5n = 30$   $n =$  \_\_\_\_\_

3.  $y - 4y = 33$   $y =$  \_\_\_\_\_

4.  $12 = 4(b - 2)$   $b =$  \_\_\_\_\_

5.  $-3(k - 4) = -6$   $k =$  \_\_\_\_\_

6.  $m - 3m + 3 = 11$   $m =$  \_\_\_\_\_

7.  $2(x - 9) + 5 = 1$   $x =$  \_\_\_\_\_

**Reteaching 7-3****Multi-Step Equations With Fractions and Decimals**

Solve  $0.25x - 0.4 = 1.6$

You can clear the decimals first. Since 0.25 is the decimal with the greatest number of decimal places and  $0.25 = \frac{25}{100}$ , multiply each side by 100.

$$0.25x - 0.4 = 1.6$$

$$100(0.25x - 0.4) = 100(1.6)$$

$$25x - 40 = 160$$

$$25x - 40 + 40 = 160 + 40$$

$$25x = 200$$

$$\frac{25x}{25} = \frac{200}{25}$$

$$x = 8$$

Multiply each side by 100.

Distribute and simplify.

Add 40 to each side.

Simplify.

Divide each side by 25.

Simplify.

**Solve each equation.**

1.  $0.8x + 2.1 = 5.3$

2.  $0.5k - 3.4 = 0.1$

$x = \underline{\hspace{2cm}}$

$k = \underline{\hspace{2cm}}$

3.  $2.7n + 4.1 = 36.5$

4.  $0.96m - 1.8m = -12.6$

$n = \underline{\hspace{2cm}}$

$m = \underline{\hspace{2cm}}$

5.  $0.7b + 6 - 0.3b = 6.8$

6.  $1.4a + 3.5a - 4.3 = 44.7$

$b = \underline{\hspace{2cm}}$

$a = \underline{\hspace{2cm}}$

**Reteaching 7-4**

Write an Equation

**Write an equation. Then solve.**

Orlando worked for \$6/h one week and \$7/h the next week. He worked 5 more hours the second week than the first and earned \$347 for the 2 weeks of work. How many hours did he work each week.

Let  $h$  be the number of hours Orlando worked the first week.

Then he worked  $h + 5$  hours the second week. He earned  $6h$  dollars the first week.

**Words**    Earnings week 1    +    Earnings week 2    =    Total earnings



**Equation**             $6h$             +             $7(h + 5)$             =            347

Now solve.

$$6h + 7(h + 5) = 347$$

$$6h + 7h + 35 = 347$$

$$13h + 35 = 347$$

$$13h + 35 - 35 = 347 - 35$$

$$13h = 312$$

$$\frac{13h}{13} = \frac{312}{13}$$

$$h = 24$$

Distribute.

Simplify.

Subtract 35 from each side.

Simplify.

Divide each side by 13.

Orlando worked 24 hours the first week. He worked  $h + 5 = 24 + 5 = 29$  hours the second week.

Check:  $24 \cdot 6 + 29 \cdot 7 = 144 + 203 = 347$ .

**Write an equation. Then solve.**

1. The sum of half of a number and 8 less than the number is 25.

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2. A triangle has two sides equal in length and a third side 5 in. longer than half the length of each of the other two sides. If the perimeter of the triangle is 50 in., how long is each side?

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# Reteaching 7-5

## Solving Equations With Variables on Both Sides

Solve  $4(n - 5) + 2 = 3n - 4$ .

$$4(n - 5) + 2 = 3n - 4$$

$$4n - 20 + 2 = 3n - 4$$

$$4n - 18 = 3n - 4$$

$$4n - 3n - 18 = 3n - 3n - 4$$

$$n - 18 = -4$$

$$n - 18 + 18 = -4 + 18$$

$$n = 14$$

Distribute.

Simplify.

Subtract  $3n$  from each side.

Simplify.

Add 18 to each side.

Simplify.

Solve each equation.

1.  $7x + 9 = 4x$

2.  $8m - 5 = 5m + 7$

$x =$  \_\_\_\_\_

$m =$  \_\_\_\_\_

3.  $k + k + k = k + 18$

4.  $3(n - 5) = -2n$

$k =$  \_\_\_\_\_

$n =$  \_\_\_\_\_

5.  $4(y - 9) = 3(2y - 8)$

6.  $6(z - 2) + 3 = 3z - 15$

$y =$  \_\_\_\_\_

$z =$  \_\_\_\_\_

7.  $x + 7x + 15x = 29x + 18$

8.  $8(7 - p) - 8 = -16(p - 2)$

$x =$  \_\_\_\_\_

$p =$  \_\_\_\_\_

# Chapter 7 Answers (continued)

## Reteaching 7-1

1.  $4n + 13 - 13 = 1 - 13$ ;  $4n = -12$ ;  $\frac{4n}{4} = \frac{-12}{4}$ ;  $n = -3$
2. 5
3. -6
4. 28
5. -2
6. -5
7. -45

Answers

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## Reteaching 7-2

1.  $3a - 12 = 9$ ,  $3a - 12 + 12 = 9 + 12$ ,  $3a = 21$ ,  $\frac{3a}{3} = \frac{21}{3}$ ,  $a = 7$
2. 5
3. -11
4. 5
5. 6
6. -4
7. 7

## Reteaching 7-3

1. 4
2. 7
3. 12
4. 15
5. 2
6. 10

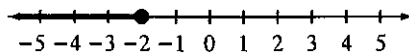
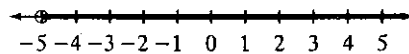
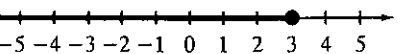
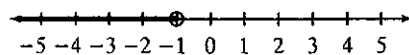
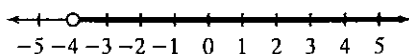
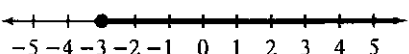
## Reteaching 7-4

1.  $\frac{1}{2}n + (n - 8) = 25$ ;  $n = 22$ ; the number is 22.
2.  $s + s + \frac{1}{2}s + 5 = 50$ ;  $s = 18$ ;  $\frac{1}{2}s + 5 = 14$ ; The sides are 18 in., 18 in., and 14 in.

## Reteaching 7-5

1. -3
2. 4
3. 9
4. 3
5. -6
6. -2
7. -3
8. -2

## Reteaching 7-6

1.  $x \leq -2$ , 
2.  $x > -5$ , 
3.  $k \leq 3$ , 
4.  $y < -1$ , 
5.  $x > -4$ , 
6.  $t \geq -3$ , 

## Reteaching 7-7

1.  $x = \frac{y-b}{m}$
2.  $m = \frac{y-b}{x}$
3.  $s = \frac{p}{6}$
4.  $h = \frac{2A}{B+b}$
5.  $P = \frac{I}{rt}$
6.  $x = \frac{3(y+5)}{2}$
7.  $p = \frac{t}{0.05}$
8.  $w = \frac{V}{lh}$
9.  $m = \frac{2k}{v^2}$
10.  $V = \frac{W+pL}{p}$
11.  $G = \frac{Fr^2}{m_1m_2}$
12.  $L = \frac{pV-W}{p}$
13.  $e = \frac{hv-E}{V}$
14.  $m = \frac{Mu}{v-u}$

## Reteaching 7-8

1. \$45, \$1,545; \$1,545, \$46.35, \$1,591.35; \$1,591.35, \$47.74, \$1,639.09; \$1,639.09, \$49.17, \$1,688.26
2.  $B = 1,500(1 + 0.03)^4 = \$1,688.26$